

### **REMARKS/ARGUMENTS**

Claims 1 and 18 are amended. Referring to the published specification, support for the amendments can be found at line 3 paragraph [0022]; line 12 of [0042]; figures 1, 3 to 4, 6 to 10, and accompanying text. Applicants respectfully request favorable reconsideration in view of the foregoing amendments and the following remarks.

#### ***Claim Rejections – 35 USC § 103***

The Office Action rejected claims 1-3, 9, 10, and 21 under Section 103(a) as being unpatentable over Schwarz et al. (U.S. 6,468,314) in view of Bonutti (U.S. 6,117,160). Applicants respectfully submit that the amended claims would not have been obvious from the combined teachings of Schwarz and Bonutti.

Schwartz. Fundamentally, Schwartz discloses a bio absorbable insert 16 that is anchored in position by a retaining element 14. In the Office Action, the Examiner, referring to figure 15 identifies a biocompatible pad 28F with connecting portions 132 extending from the periphery of this pad. The Office Action acknowledges that Schwartz does not disclose the connecting element being spaced apart from the pad in anchored position by a length of the connecting portions within the groove. In addition, Schwartz does **not** disclose:

- Connecting portions 132 extending from the perimeter of the pad in a direction towards retaining element 14F.
- Connecting portions 132 providing a connection between retaining element 14F and pad 28F.
- Connecting portions 132 extending into a groove to a greater depth than pad 28F.
- Retaining element 14F spaced apart from pad 28F in anchored position.
- Retaining element 14F pushed into the bone and exerting a downward pulling force on connecting portions 132 so as to locate pad 28F in the bone site. Furthermore, retaining element 14F is coupled directly to pad 28F and connecting portions 132 are not subjected to this downward pulling force so as to, in turn, locate pad 28F in the bone site.

From the foregoing, Applicants respectfully submit that there are numerous claimed features that are neither disclosed nor suggested by the teachings of Schwartz. Applicants further submit that Bonutti fails to disclose or suggest the missing claim features.

Bonutti. Bonutti relates to a method and apparatus for securing sections of fractured bone and/or body tissue to a bone. Bonutti is not directed to the repair of damaged cartilage according to Schwartz. Bonutti does not relate to the anchoring of a bio absorbable insert at a cavity or groove from which damaged cartilage has being removed. Clearly, Bonutti according to figures 1 to 12 and associated text, is directed to securing together fractured sections 22 and 24 of a bone. Particularly as the medical profession comprises very distinct specializations, the skilled person would not readily combine the disclosures of Bonutti with Schwartz to arrive at the claimed invention.

In any event, Bonutti discloses the use of two anchors 50, 52 connected via a suture 38 being looped to extend through respective central portions of anchors 50, 52 and a bone tunnel 40 extending through aligned fracture portions 22 and 24. The Examiner considers Bonutti relevant only inasmuch as anchors 50 and 52 are spaced apart and connected by a centrally extending suture loop 38.

Quite clearly, the skilled person would not be prompted towards the subject invention merely by the combination of Schwartz and Bonutti. Bonutti discloses the separation of two button-line anchors 50 and 52 whilst Schwartz discloses a mushroom-like bone plug comprising bio absorbable head 16 anchored in position by a centrally projecting stem 14.

Importantly, the means by which head portion 16 of Schwartz and anchors 50 and 52 of Bonutti are held in position involves a stem 14 or elongate suture 38, both extending centrally from the respective head 16 or anchor 50, 52. Neither Schwartz nor Bonutti discloses the features of connecting portions extending between a pad and a retaining element and attached to or near the periphery or perimeter of the pad.

As described in the specification as filed, the subject invention provides a repair kit to provide increased post surgical repair rates and improved prosthetic implantation strength. Referring to figure 5B or 8A of the application as filed, the repair kit is utilized at a bone site in which a cavity 23, 27, 28 is formed by removing damaged cartilage present at or on the surface of

the bone site. The repair is made by retaining a bio compatible pad 11 in position at cavity 23, 27, 28 so as to allow bone cell in-growth from the surrounding bone into pad 11. The present invention is advantageous over Schwartz by maximizing the surface area contact between pad 11 and the bone cavity 23, 27, 28.

Specifically, as the elongate connecting portions extend from the pad to the retaining element at or near the perimeter of the pad, almost the entire downward facing surface of the pad is positioned in contact with the lower region of the bone cavity. This significantly increases the in-growth rate of bone cells at pad 11. In contrast, bio absorbable pad 16 of Schwartz is retained in position by the centrally projecting element 14 which reduces significantly the surface area contact. Moreover, radial arms 28F of Schwartz further decrease the available contact surface area for bone in-growth.

Moreover, the entire area of the underside of the pad of the subject invention is maintained in contact with the base region of the cavity as the connection portions exert a substantially equal pulling force at the pad's perimeter. This is in contrast to the bone plug design of Schwartz which discloses a centrally projected retaining element 14. Clearly, the perimeter of the Schwartz pad 16 is held in contact with the bone site less firmly than the corresponding central portion which is disadvantageous for uniform bone cell in-growth across the implant.

From the foregoing, Applicants respectfully submit that the features of the claimed invention, including those identified and discussed above, would not have been obvious from the combined disclosure of Schwartz et al. and Bonutti. Applicants respectfully request withdrawal of the rejection of claims 1-3, 9, 10, and 21 under Section 103(a).

Claims 4-8 and 11-20. The Office Action rejected the remaining claims under Section 103(a) by combining the teachings of Schwartz et al. and/or Bonutti with the secondary references Goulet et al. (U.S. Publication 2007/0005138), Seedhom et al. (U.S. Publication 2003/0135209), Schmieding (U.S. 7,264,634), and Johanson et al. (U.S. Publication 2002/0042624). None of the additional documents cited by the Examiner disclose or suggest the provision of an array of elongate connecting portions attached to or near the perimeter of the pad, the connecting portions being configured to extend away from the general plane of the pad at or

near the perimeter of the pad in a direction towards a retaining element to provide a connection between the retaining element and the pad, the connecting portions configured to be introduced into the groove to a greater depth than the pad and to be anchored therein.

Accordingly, Applicants respectfully submit that the combination of Schwartz and/or Bonutti with the secondary references fails to teach or suggest each and every claim element recited in the rejected claims. Therefore, Applicants respectfully request withdrawal of the rejections under Section 103(a).

Applicant respectfully requests that a timely Notice of Allowance be issued in this case. If there are any remaining issues preventing allowance of the pending claims that may be clarified by telephone, the Examiner is requested to call the undersigned.

Respectfully submitted,

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The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-0843.
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